NPIC/TSG/RED/SDB-052-70
16 November 1970

MEMORANDUM FOR THE RECORD

SUBJECT: PICCIP Staff Study

Statement of the Objective

1. Rationale and explaination of options of PICCIP, an ADP machine based contract reporting program, providing information for Center use and inputs to the DDS&T Contract Information System.

History

2. In June 1968 NPIC agreed to begin providing inputs to the DDS&T Contract Information System (CIS). This task, initially levied on TSG/PPS, was transferred to TSG/RED in October 1969. The move was carried out in an effort to facilitate rapid updates to the System.

3. Until the summer of 1969, NPIC/TSG/RED has been using the sheets in attachment 1 (CIS forms 2799 and 2799a). In June 1969 it was determined that the then current project sheet was not providing sufficient information for RED management. The sheet in attachment 2 (IPFM 561) was then developed. This was used internally in addition to the 2799 and 2799a still completed for the DDS&T.

4. By December 1969 it was determined that several errors still existed in the Contract Information System inputs of RED. [   ] a RED co-op, was given the job of correcting the entries, and he worked at this during his three-month tour from December 1969 to March 1970.

5. By March 1970 most of the major problems had been solved, but the lack of display of obligated amounts in the DDS&T reports remained. Sixteen hours of effort in June 1970 located the difficulty and provided necessary coordination; obligated amounts are now appearing.

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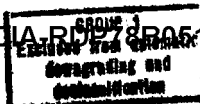
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6. Two major problems remain, however:

   a. There exists no convenient method of obtaining summary information (such as a list of all contracts a particular officer is responsible for or a listing of all contracts in a particular State) except by vigorous and time consuming manual techniques using our internal forms.

   b. There exists an 85 per cent duplication of information between the DDS&T forms 2799 and 2799a and RED's internal sheet IPFM 561. This leads on to extensive duplication of effort in updating the forms and, as a consequence, increases the chances of introducing human error in transferring information.

7. In an attempt to correct these problems, a program for the Univac 494 computer in [   ] has been developed. This program has the following options:

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   a. Entry of contracts with an immediate listing of the raw data, giving the operator a record of what was entered. The subroutine has error checks that will automatically cause an abort on any major error in data formatting.

   b. Printout of a single contract record so that current information may be determined.

   c. Printout of the entire contract file upon entry of PRINT via cards or teletype.

   d. Printout of all contracts a particular officer is responsible for when his name is typed into the computer.

   e. Printout of six concise lines about any contract upon entry of the contract title.

   f. Printout of six information lines on a contract upon entry of the relevant NPIC Management Information System (MIS) number.

   g. Will provide a listing of all contracts in a State upon entry of any State name.

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h. Upon entry of the abbreviation SCHED, a
sheet showing approval milestone completion
dates for each year's program will be produced.

In order to prevent the monthly contract listings
from becoming massive stacks, three other options are
available that reduce the output.

i. CPLAN - prints out a complete record of plan-
ned items.

j. ACTVE - prints the active contract record

k. CMPLT - prints a complete record of all com-
pleted contracts.

Certain housekeeping and liason functions are also
built in.

l. DELET - provides for the removal from the
file of any contract. This is useful either
upon cancellation of a planned program or to al-
low for the re-entry of a record if the data in
the file is totally "garbled."

m. UPDTE - allows for the line by line correction
or updating of information in the file.

n. PUNCH - will cause a search of the file to
occur. Any lines changed since the last time
this feature was exercised will be punched into
IBM cards in a format identical with that re-
quired by Headquarters for the DDS&T Contract
Information System while at the same time a list
of items being punched will be printed for our
records.

8. The design of the program is such that additional
features may be conveniently added.

9. The main advantages of the system are:

9.1 Provides for the complete integration of the
Headquarters' CIS with RED's project management sheets
while providing both with just what they need and
nothing else.

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9.2 Eliminates the need for manually develop-
ing special reports or summaries needed by division,
group, or Center management.

9.3 Provides for the automatic production of
Headquarters' inputs and publication of regular in-
building reports.

9.4 Significantly reduces chances for error as
one input serves both systems while at the same time
reducing clerical time required.

10. All report routines are output only. This elim-
inates chances of accidentally damaging the file. Only
those having a need will be provided with instructions on
techniques to change the information in the file.

11. In order to prevent a "jam up" of output at remote
computer terminals, certain routines will be restricted to
machine room access. Only those requiring a complete print-
out of the entire contract file and those needing the card
punch are so restricted. This in no way restricts complete
searches, such as that required for six lines on all con-
tracts of an office, as this would usually produce only two
or three pages; and such searches are available from all
remote terminals. These routines, accessible from the
machine room, will be available on 24 hour service. A
request would be left one day and picked up the next.

12. The development of this system has been fully
coordinated with the DDS&T Management Information Officer
(MIO), who is responsible for operation of the DDS&T Con-
tract Information System. As attachment three, please
find a memorandum from the DDS&T MIO indicating his agree-
ment to accept our weekly updates to their system on cards
rather than on hand coding forms as we have been doing.

13. Relative Cost Savings - At the present time,
approximately 90 man-hours per month of secretarial time
are spent in providing updates and inputs to the CIS at
Headquarters and maintaining our project sheets. In addi-
tion, up to 20 hours of supervisory and project officer
time equivalent to a GS-12 are needed to answer requirements
for special lists that cannot be obtained from the CIS but
at this time are immediately available from PICCIP.

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14.   The proposed "in-building" system will reduce this labor expense significantly while increasing accuracy and improving performance. Rather than having to make manual extractions of information from the RED sheets for Headquarters and hand coding them, the secretary will simply type the information into the computer memory via a teletype unit. This function is now performed to make up the RED sheet. The computer will obviate the need for hand coding of information for Headquarters by marking those lines Headquarters needs and punching them when PUNCH is called up.

15.   Any time special reports are needed they can be extracted from the data base by entry of the appropriate abbreviation. Simple, clear instruction sheets will be provided to all who need them to allow one totally unfamiliar with the system to obtain the information he wants. Among those this would benefit are:

PPBS

   a.   Obtaining the latest budgetary information for the RED research program by entry of CONTT and specifying the fiscal year interested in.

   b.   Obtaining a summary of the contracts a particular officer is responsible for.

   c.   Developing lists of contracts with a particular company or in a particular State in response to letters similar to that recently received from Sen. Byrd.

   d.   Determining the name of a contractor from a contract title only by entry of COMMA and the contract title returning six lines including contractor and project officer.

TSG and RED

   a.   Budgetary summary.

   b.   List of contracts a company has had for use as a history of their capabilities.

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c. A short list of all contracts a particular officer is responsible for so as to check how well he is meeting his schedule.

d. Six lines of information under the MIS No. if the Contract Information System No. is not known.

e. Determination of the project officer responsible for a contract if only the title is known.

PSG and IEG

Meetings have recently been held exploring methods of increasing coordination and information flow on R&D work between RED, IEG, and PSG components. Among the solutions agreed upon has been the introduction of a number of special listings on a regular basis. Most of these lists either now exist in PICCIP or can easily be added.

16. This ability of the program to produce special listings will also result in a significant manpower savings. Rather than having a member of the RED front office personally collect particular information needed for special reports on a regular basis, the entry of the appropriate abbreviation will produce the desired list.

Other Concepts Considered

17. Mag Tape Storage - Unsatisfactory as computer room intervention required to access file. Would be satisfactory if a tape servo could be dedicated to this program permanently, but this is not cost feasible as need exists access data at all times that computer is up.

18. Punched Card Storage - No random access compilation without entering entire deck each time. Additionally, no automatic outputs to the DDS&T Contract Information System would be possible, integrity of the file would be severely compromised due to vulnerability of the card deck, PPBS would not be able to get information easily as they would have to contact us, and severe backlogs would occur at remote computer terminals whenever data was read in.
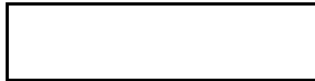
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19.   Mag Card or Mag Tape - These would be somewhat less clumsy than punched cards, but all restrictions of a manual system would remain, such as no random access, no special listings, information available only through CIS No., and no quick reaction reports.

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Distribution:
   Original - Route & File
          1 - C/TSG
          1 - C/PSG
          1 - C/IEG
          1 - C/PPBS
          1 - C/PPS/TSG
          1 - Originator
          1 - SDB/RED/TSG

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